



THE RARA RAG

Newsletter of The Rochester Amateur Radio Association, Inc.

Founded in 1931

MAY 2019
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FILL'R UP WITH 30kWh OF ELECTRONS AND TAKE A RIDE

SCOTT THEIS, W2LW, RAA VICE PRESIDENT

The promise of electric vehicles has been on the horizon for decades. While expensive, there are a lot of choices on the new car market. There is also growing used market offering a lower entry cost. There has also been an explosion of information available regarding the selection, operation, care and feeding, and pros and cons.

This month I will have the pleasure of presenting at our general meeting. After years of thinking about buying an electric vehicle, my wife and I finally pulled the trigger. The process has been interesting and now I plan to do some testing to mate my new Yaesu FTM-400XDR to the car. Part of the presentation will be the result of this effort as well as the fruits of my EV research.



During the presentation, I will also explore some of the practical and the technological aspects of electric vehicles presenting some of my research results. Some questions:

- ⇒ How RFI noisy are electric cars? We know phone chargers and certain wall-warts generate a lot noise, what is it like when a car is charging at 3.8kWh?
- ⇒ How much RFI do they generate while driving?
- ⇒ How clean is the 12V power? How much power can one take from the 12V system and for how long? Can you run it dead in the field and get stuck?

I will also delve into the many questions I had while researching the purchase of a car including charging, operation, and the dreaded "range anxiety".

Lastly, since my hands-on perspective is narrowly applied to the Soul EV, if there are others at the meeting who own and operate an EV, we can share that information with everyone.

Please join us on Wednesday, May 1st, 2019, 7:00PM at the Boy Scouts Headquarters at 2320 Brighton Henrietta Town-line Road, Rochester, New York 14623.

RARA



K2JD

N2EH

W2EOC

Rochester Hamfest 2019

HELLO FROM THE ROCHESTER HAMFEST 2019 COMMITTEE!



- June 1st, 7am - 2pm
- Hilton Exempt Club
- 137 South Avenue
- Hilton, NY 14468

WE NEED VOLUNTEERS

Friday

- A few hours in the afternoon
- Setting up the indoor space, flea market parking layout, and free parking demarcation.

Saturday

- Various shifts from 5:30am to 4:00pm
- Ticket sales, Traffic and Parking guidance, Raffle ticket sales, Country Store, Cleanup



Please use this form to sign up: <https://goo.gl/forms/Fj4QYQDURDDVGWUC3>

New This Year

PRESENTATIONS

Ham Radio Deluxe

HobbyPCB

DX Engineering

Please mark all times or tasks for which you are available, and leave a comment such as "Interested in working one 2-hour shift. Prefer morning"

Once people start signing up, we'll put you into specific timeslots and put it on the hamfest site. We'll also send an e-mail to all volunteers to confirm that they are okay with their slots.

Watch future RAGs and <https://www.rochesterham.org/hamfest.htm> for updates.

BUCKET RAFFLE

TICKETS

1 for \$1, 6 for \$5, 13 for \$10

PRIZES

Complete HF Station

- IQ32 5W HF Software Defined Radio
 - Speaker Microphone
 - Power Supply
 - MFJ941E Antenna Tuner
 - 50 ft RG-8X coax
 - 1:1 Balun
 - 300 ft Antenna Wire
 - End Insulators
 - Support Rope

Bird Model 43 Wattmeter

With certificate for element

Signalink

Soundcard Radio Interface

Computerized Battery Analyzer

DOOR PRIZE

You must be present to win

PRIZES

\$100 Gift Certificates

Magazine Subscriptions

- QRP Quarterly
- Nuts & Volts
- SERVO
- Circuit Cellar
- audioXpress

Wire Antennas

Ham Radio Software

- Ham Radio Deluxe
- N3FJP

Accessories

- IQ Keyer
- Anti Corrosion / Weather Guard Kit
 - 20W Dummy Load
 - Atomic Alarm Clock
- LED DVM—Cigarette Lighter Plug
 - Lightning Surge Protector

And More

BOARDZ BUZZ

DON KISER, AC2EV

Spring has sprung in Rochester and all the snow should be gone. The groggy amateur has awoken from their slumber and it's time to start thinking about spring projects. It should be about time to build a new antenna and test it out. You'll probably need a BALUN or two and fortunately for you the RARA Academy will be May 11 at the Monroe County EOC and the topic is, you guessed it, BALUNS. You'll be able to build your own BALUN (for a nominal materials fee) and have the experts will be there to help you out.

If you have other questions there's always the Elmer's corner before each monthly meeting. We meet in the small glass conference room next to the main area and have Elmer's on hand to answer whatever questions you may have. We've gotten quite a few questions on grounding and will be hosting a RARA Academy on that topic in the future, stay tuned.

As the rest of Rochester and Monroe County starts to spend more time outside that means it's time for Ham's to show the world what we do and that means Public Service. RARA and its member volunteer hundreds of hours each year serving the Public at large. Not only is it helpful, it's fun too. Hone your emergency service skills at an event. Coming up is one of our most popular events the Tour de Cure. Its never too early to get ready. If even you don't have any on-air experience you can still help. All are welcome.

If you have the time consider volunteering to help the club with refreshments or the raffle. It's only a short time once a month (15 minutes or so). You're coming to the meeting any way so why not earn some club points too.

If you're looking to increase your collection of amateur radio gear or looking to enhance your license class the Hamfest is coming up on June 1st. It's right around the corner. The volunteers are looking forward to seeing you at the Hilton Fireman's Exempt. Catch up with old friends and stop by the VE testing to upgrade your license. I know I'll be there. Last year we had a great turn-out and I think its one of the best locations.

If you haven't had a chance to volunteer with the search for a club station, its never too late. The current committee is scouring Monroe County for a suitable location. Just like you may have found at home, finding a location that will allow antennas and be accessible for our members is difficult. But the search goes on.

I plan to put an antenna or two this summer and see how it works. Maybe a simple end-fed. I'll also be taking the kids out to various parks in the area and do some fox hunting. This field day, if mother nature doesn't do it first, I'll be putting the generator to the test and be a 1E station.

Get on the air, get outside, and get going.

CALENDAR OF EVENTS

WEDNESDAY MAY 1, 2019 - RARA General Meeting

7:00 PM at BSA Headquarters

2320 Brighton Henrietta Town Line Rd

Thursday May 2, 2019 - RARA Board of Directors

5:45 PM at Novaworks, 333 Metro Park, F-500

SATURDAY JUNE 1, 2019 - ROCHESTER HAMFEST 2019

OLD TIMERS' NIGHT



RARA President Tim Guyot KB1POP and 6 Previous RARA Presidents

(L to R) Tim Guyot KB1POP, Frank Schramm WB2PYD, Ed Gable K2MP, Forest Shick WA2MZG, Robert Hobday N2VEG, Clifford Milner Jr. K2SKO, Jim DiTucci N2IXD



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PEAK THE GRID

FOREST SHICK, WA2MZG, HAMFEST RAFFLE PRIZE COORDINATOR

VENDORS

For the previous three hamfests, 2016, 2017, 2018, and now this years' event, I have been seeking donations for our door prizes and raffles.

The first year, the hamfest at Kodak, it seemed like an insurmountable mountain to climb - trying to beg vendors to donate prizes.

The real mountain was gathering all the vendor names, web sites, contact people, email addresses, phone numbers, etc. and then documenting the information for the next year.

My surprise was the willingness of many vendors to support our hamfest through donations of product or gift certificates and significant discounts on items we planned to purchase.

Many vendors participate year after year and some only once. But as one vendor pointed out, there are many hamfests and we have to take our turn.

SO, my point is:

PLEASE SUPPORT OUR HAMFEST VENDORS

When you need a new piece of equipment, a tool, antenna, radio, tuner, power supply, coax, magazine, book, etc., please contact our loyal vendors first. You can find the vendors in the hamfest editions of the RAG for 2016, 2017 and 2018. Coming soon will be the 2019 hamfest edition of the RAG.

To make your search a bit easier, the following is a list of vendors from 2016 to the present.

Affirmatech
Allied Electronics
Appleby's
American Radio Relay League
AudioXpress Magazine
Bird Technologies
Buffalo Wild Wings
Chameleon Antennas
Circuit Cellar Magazine
CQ Magazine
DeltaSonic
Dibella's
DX Engineering

Elecraft
Five Dash Inc
FlexRadio Systems
Gifts4Hams
Ham Radio Deluxe
HobbyPCB
Jeremiah's Tavern
Kits and Parts
Maxcon-Antennas
MFJ
Mosley
NCG Company
Nuts and Volts Magazine
NXP
Pacific Antennas
QRP ARCI
Quicksilver
Radio Oasis
RF Adapter Guy
Radio Society of Great Britain
Save Around Rochester
SERVO Magazine
Tigertronics
Universal Radio
ULINE
West Mountain Radio
YourDuino

VOLUNTEER FIRE DEPARTMENT

Two organizations that made last year and this year's hamfest possible are the Hilton Exempt Club and the Hilton Volunteer Fire Department.

Please remember to say thank you to these groups.

We all do not live in Hilton but many, many of us live in areas served by volunteer fire departments. Please remember to thank them for their service to your community as a way of thanking the Hilton Volunteers.



EDUCATION

TIM BROWN, WB2PAY, EDUCATION COORDINATOR

THE ELMERS CORNER

At RARA General meetings, there will be an ELMER available from 6:15PM to 6:45PM to answer questions and assist with technical advice.

Recent Elmer sessions have discussed Station Grounding, Multiband Antennas and QRP operations.

Questions may be submitted ahead of time to:

<mailto:education@rochesterham.org>

RARA ACADEMY WORKSHOPS



MAY 11th — BALUN THEORY AND CONSTRUCTION
49:1 UNUN FOR EFHW ANTENNA

Saturday May 11th, 2019 (10am-Noon)

Session will be held at the [Monroe County EOC, 1190 Scottsville Rd. Suite #200, Rochester, NY 14624](#)

BALUN TOPICS FOR DISCUSSION:

- Baluns - What do they do?
- 1:1, 4:1, 49:1 What ratio do I need?
- What Toroid Core should I use?
- Applications for various Baluns or UNUNs
- End Fed Half Wave, Random wires, Dipoles

BALUN BUILD:

- Wire your own Balun on a FT240-43 core
- **Cost \$10 - REGISTER TO RESERVE A CORE AND WIRE**
- **An Additional core for \$5.**

This Session will be hosted by Pete Schuch, WB2UAQ and Larry Brightenfield, W2LB.

Sept. 14th — STATION GROUNDING AND LIGHTNING PROTECTION

Location TBD

Sign up for Academy Workshops by emailing

<mailto:education@rochesterham.org>

Latest Academy information is available at https://www.rochesterham.org/rara_academy.htm

MAY RAFFLE

May Raffle prizes are pictured below:

- Surge Protector
- Center Insulator
- Antenna Support Rope

Coming in September
TBD



PUBLIC SERVICE UPDATE

MIKE MOORE, KC2NM, RARA PUBLIC SERVICE COORDINATOR

The American Diabetes Association (ADA) Tour de Cure starts and ends in the Xerox Campus in Webster on Saturday, June 8. It runs from 6 AM to 4:30 PM. To sign up to help with Tour de Cure go to the Public Service Menu at the RARA Website http://rochesterham.org/public_service.htm. There you can click on the ADA Tour de Cure "Sign Up" link on the right-hand side of the page. This link leads to a Google Form for you to register your sign up information. We will guard your personal information and see that it is used only as needed by the event organizers. You will only be identified using your FCC Callsign and first name. Please complete the form and hit "Submit". You will receive a confirmation screen with instructions about radio programming. The following Amateur Operators have signed up: (AB2OY, K2AXP, K2GC, K5KHK, KB2FSB, KC2NM, KC2UES, KD2DNO, KS2JEK, N2BNE, N2PEZ, W2DST, W2ODD, WE2LEW). This is a great start but we need several more operators to make the event the success that we want it to be. We are given pick-up trucks to use for the event and I would encourage you to opt to use one of these brand new vehicles. This is sure to add to your fun! There is also a link for event information which will allow you to see the routes and get more information. If you prefer, you may sign up by contacting the event captain, Mike Moore KC2NM directly via email at mikemoore@ieee.org.

Tour de Cure is a bicycle ride with several routes and they are the same routes as in 2018. There are 12, 25, 40, 62, and 100 mile routes which follow Lake Rd East from Xerox and then loop back to the finish. All routes feature beautiful lakefront views and travel through small towns of Wayne and Monroe Counties. If you have non-ham family members who would like to participate, we can use them as phone operators and there are many other volunteer opportunities. Teams compete in this ride and obtain sponsorships for donations to the efforts of the ADA which has as its mission to prevent and cure diabetes and to improve the lives of all those with diabetes. This is a very important event for our community. This year's Rochester goal is to have 123 teams competing with 1,623 riders to raise \$1,150,000.00! Through the efforts of volunteers such as yourselves, the 2017 and 2018 Tour de Cure were the most successful in the US.

RARA provides primary communications for this event with sweep operators driving on the course who identify problems on the course and communicate with net control at the command center using mobile radios. SAG (Support and Gear) vehicles can help riders with minor mechanical problems or transport them to rest stops where mechanical help is available. Net Control is located at the command center and coordinates communications using Amateur Radio volunteers and with telephone operators from the ADA. Hams are needed for sweep, SAG, and Net Control Operations. This event is a chance for us to hone our skills as radio operators in a setting which provides real help to our community. Please consider signing up to help as soon as you can so that we can communicate the route information and other needs. Please mark your calendars for a training and safety meeting (with sandwiches) to be held on the evening of

Mon May 20, 2019 6:00 pm – 8:00 pm at the [Webster Recreation Center 1350 Chiyoda Dr. Webster, NY](#). Also, please look at the upcoming public service activities and think about how you can help.

Upcoming Events:

Radio Merit Badge	BSA Headquarters	Saturday	April 27, 2019
Tour de Cure	Xerox Campus Webster	Saturday	June 8, 2019
Bike MS: ROC the Ride	Genesee Valley Park - Rochester, NY	Saturday	August 24, 2019
Fairport Lift Bridge Regatta	Erie Canal – Fairport, NY	Saturday	Sept. 28, 2019
Jamboree On the Air	Camp Babcock Hovey	Saturday	Oct. 19, 2019
Pumpkin Patrol	Overpasses of the New York State Thruway	Wednesday & Thursday	Oct. 30-31, 2019
Holiday Science & Technology Day	Rochester Museum & Science Center	Saturday	Christmas Week

ITEMS FOR SALE

A Syracuse not for profit group has a Rohn SSV 60' tower that we are going to take down soon. Some coax included. Reasonable donation accepted.

Call for details

Joe Gurka

Helping Hounds Dog Rescue

315-466-8585

CHANGES ON THE BOARD

TIM GUYOT, KB1POP, RARA PRESIDENT

I'm writing to announce two resignations from the Board.

Ralph Dutcher, KD2BDZ, has resigned as Secretary. He will still be active in the club, but his duties on the board were competing with his other volunteering efforts. Mike Moore, KC2NM will serve as acting secretary.

James Burroughs, KN4LSL, has resigned as director. James has received a promotion (congratulations!) and will be relocating. The board is not rushing to fill this vacancy, focusing instead on the next board.

To both, on behalf of the entire club, I thank you for your participation on the board.

IT SHOULD JUST BE A WEEKEND PROJECT, PART I

Don Kiser, AC2EV

That's what I told myself back in March. All the meteorologists were warning of a potential big windstorm just like we had a couple years prior. While we only lost power for a few hours overnight during the last one, I was determined to not risk it this time.

I decided that I was going to buy a generator to have at the ready just in case. Besides being prepared for disaster I could use it during Field Day and go from 1D to 1E. Hopefully, I could garner a few more points and not hear the grumble on the other end when I would give them a 59 1D report.

I went and bought a Generac 6500 watt generator, actually I ordered it online at Lowes and chose to pick it up in the store. It has generally good reviews and 6500 watts would be able to provide enough power for my needs.



Some clarification may be necessary at this point. My home has a 200 AMP service. This is shared with a 100 Amp sub-panel on the in-law side. This means I have 2 furnaces, 2 refrigerators, etc. making my ultimate solution a compromise just like most things in life. The main house (both furnaces) is on the transfer switch and the in-law refrigerator will use an extension cord.

Now the big DISCLAIMER.

I am not a licensed electrician. While I did review my final installation with two electricians, code requirements in your area may be different. You should follow all applicable rules/laws/incantations for your locale. Also, get it inspected when you're all done. Do things safely. Don't take shortcuts. A shock can always be avoided by working with the power off. Failing to follow safe work practices may result in electrocution and we don't need you becoming a Silent Key. Photos shown are work in progress and may show things that were corrected later.

This is not your father's generator

The rules have probably changed since you last saw/used a generator. The Generac generator I purchased has GFCI outlets with bonded neutrals. Even if your generator doesn't have GFCI it could still have bonded neutrals. Consult

your generator's manual and use a Volt Ohm meter to measure neutral to the generator frame. If you've got conductivity, you've most likely got bonded neutrals. There are several relevant sections in NEC that pertain to generator grounding. I urge you to at least read them and consult with a licensed electrician if unsure. We will come back to neutral wiring requirements later.

My solution – A manual transfer switch

I decided that if I'm going to do this project I'm going to do it the right way and I may as well knock a few other side projects off the TO-DO list as I go. Along with the Generac generator I *ultimately* bought a Generac manual transfer. The particular model I bought is the Generac 30AMP Homelink upgradeable transfer switch kit. It comes with almost everything you need. Missing is a 50 amp breaker that you will need to put in your main panel to power the relocated circuits when you're on commercial power. The benefit to this transfer switch is that if I decide later to put in a whole house generator I can upgrade the switching mechanism to an automatic one. Also, this transfer switch is compatible with my generator. Remember how I said that my generator has bonded neutrals? This means that for every hot wire there needs to be a matching neutral wire. Not all transfer switches do this and not all generators require it. Mine did. This is where I made an initial mistake and ordered a less expensive transfer switch from Amazon that didn't switch the neutrals and it had to go back. This transfer switch supports up to 8 circuits so now I'll have to figure out which ones I'll use.



Generac Homelink Manual Transfer Switch

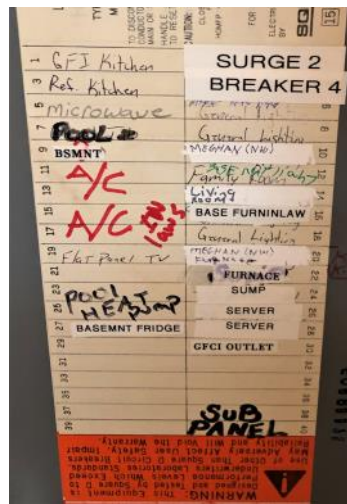
Partial Material List

- Generator
- Transfer Switch Kit
- 50 Amp breaker for Transfer Switch
- Wire Nuts
- 10/3 Romex
- Strain Reliefs/Panel nuts, conduit, etc.
- 1-2 Beverages of choice

Step 1 Planning

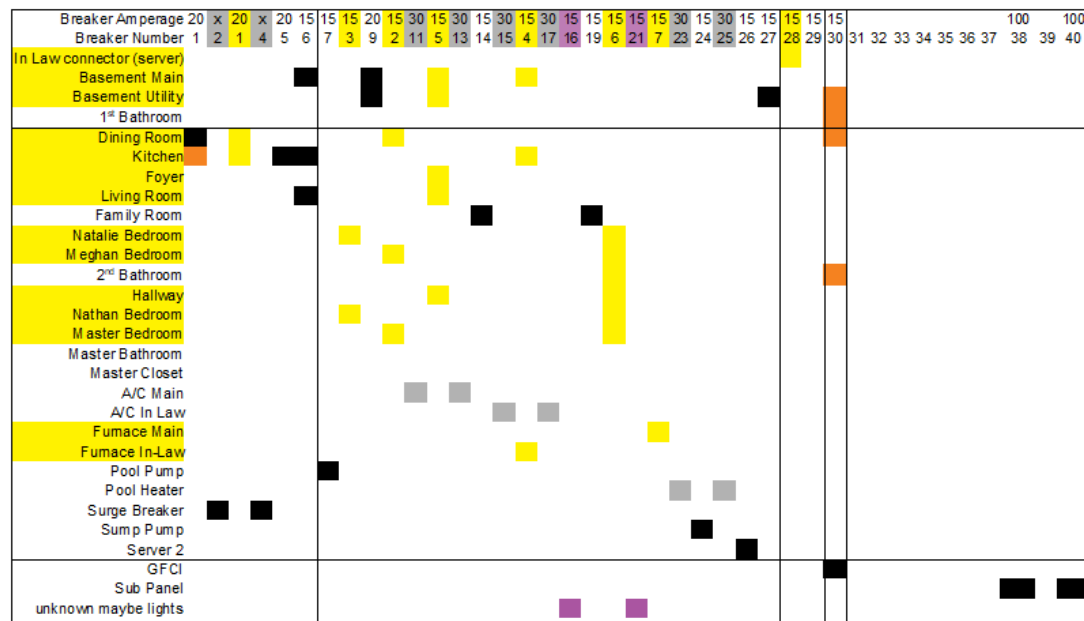
Successful projects don't typically happen without planning. This is where my side projects came in.

Here is my panel legend before I started this endeavor.



slowly go over each breaker till the device beeps. It's pretty good at locating the right breaker. Turn off the breaker to be sure you got the right one. It has a light bulb socket and clamps also.

This is the final result after assigning which circuits would get new homes in the transfer switch. Notice those two purple squares? I'm still tracking those down



Greenlee Circuit Breaker Finder

It's definitely lacking in details. While I always love to buy new tools I decided I'd borrow one for this part. Behold the Greenlee circuit breaker finder. The transmitter plugs into the live circuit under test and you use the small handheld device to

along with a light switch in the main foyer. I have no idea where or what they power. If the lights in your home randomly turn on/off that might be me.

This is my panel and generator sub-panel legend now. I think the effort was well worth it.

	3	4	SURGE BREAKER
MICROWAVE	5	6	BASEMENT STAIRKITCHEN LIGHT
KITCHEN			LIVING ROOM OUTLETS, FIREPLAC
POOL PUMP	7	8	
BASEMENT OUTLETS	9	10	
A/C MAIN	11	12	
A/C MAIN	13	14	FAMILY ROOM OUTLETS
A/C IN-LAW	15	16	General Lighting
A/C IN-LAW	17	18	
TV FAMILY ROOM WALL	19	20	
unknown	21	22	
POOL HEATER	23	24	SUMP PUMP
POOL HEATER	25	26	LEFT OUTLET NEXT TO PANEL
REFRIGERATOR BASEMENT NEAR DOOR	27	28	
	29	30	GFCI AT PANEL
	31	32	
	33	34	
	35	36	
GENERATOR	37	38	IN-LAW
SURGE PANEL			SURGE PANEL
GENERATOR	39	40	IN-LAW
SURGE PANEL			SURGE PANEL
XXXXXXXXXXXXXXXXXXXX	41	42	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX			XXXXXXXXXXXXXXXXXXXX

Main Panel Legend



Transfer Switch Panel Legend

Side Project #2 If you're going to do something you might as well overdo it

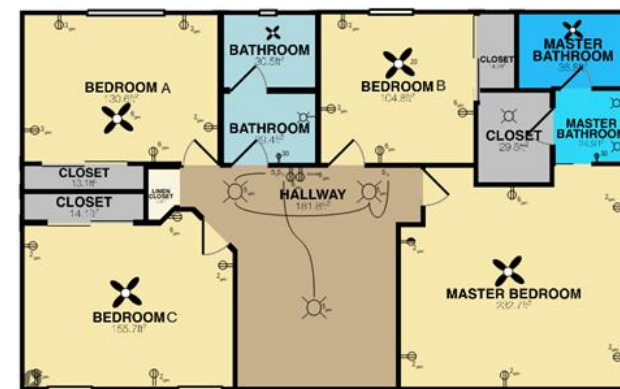
After successfully tackling the first side project I felt the need to visually map out all the circuits found. I went and purchased a program called Room-Scan for my phone. This program allows you to map each room in your house simply by walking around each room and placing the phone on each wall and touching the screen. What could be simpler?

Ok, it doesn't work perfectly and there is some manual re-positioning of the walls required but it's better than measuring it and drawing it on paper. After I mapped my entire house and some of the in-law side, here is the final result.

The circuit locations were added using LibreOffice Draw but Room-Scan did all the hard work. Alas, I didn't discover any secret rooms.



The floor plan shows a central HALLWAY (101.2 sq ft) with a light fixture. To the left is BEDROOM A (104.2 sq ft) with a ceiling fan and a closet (54.7 sq ft). To the right of the hallway are two BATHROOMS (52.4 sq ft and 52.5 sq ft) and BEDROOM B (104.2 sq ft) with a ceiling fan. To the right of the hallway is a CLOSET (23.0 sq ft) and a MASTER BATHROOM (58.2 sq ft) with a ceiling fan. There are also two more CLOSETs (23.0 sq ft and 23.0 sq ft) and a MASTER BATHROOM (58.2 sq ft) with a ceiling fan. The plan includes various electrical symbols like outlets, switches, and light fixtures.



ANOTHER SLICE OF RASPBERRY PI

KARL HEINZ KREMER, K5KHK

When I did my RARA Academy presentation about the Raspberry Pi back in January, I had to make a few cuts to not keep everybody in the room for four hours... I thought I would add some information later in the form of articles like this.

If you missed the presentation, there is a video – thanks to Scott Theis (W2LW) - of the whole session up on the RARA web site:

https://www.rochesterham.org/rara_academy.htm - just scroll down to “Introduction to Raspberry Pi and Ham Radio Application” for photos, the slides and the video.

Raspberry Pi Magazine

The Raspberry Pi Magazine had a couple of articles about the Raspberry Pi and ham radio in their last issue: <https://www.raspberrypi.org/magpi/issues/80/>

On page 62, you'll find “Pictures From Space Via Ham Radio” – a project that uses an RTL-SDR dongle to receive SSTV images.

On page 62 is a whole collection of projects in the article “Amazing Ham Radio Projects”. You will find a lot of the projects that I talked about, but also a few new ideas.

RadioBerry

If you are interested in bringing the idea of a Raspberry Pi and ham radio to the next level, how about a direct sampling SDR transmitter? The “RadioBerry” is just that. A receiver and transmitter (without the necessary low pass filters or a PA) as a hat for a Raspberry Pi: <http://www.pa3gsb.nl> – and here are some pictures of the build process: <https://sites.google.com/view/pd0lew/projects/radioberry>

Weather Station

And finally, here is a combination of two different RARA Academy sessions: Raspberry Pi and a weather station. I don't know much about it, it's an upcoming Kickstarter project that offers a no-solder solution to building a weather station based on a Pi: <https://www.kickstarter.com/projects/sunair/skyweather-a-raspberry-pi-weather-station-for-the>

Based on Don Kiser's (AC2EV) explanation of what a good weather station should look like, I don't see a thermometer that would read the outside temperature accurately...



Step 2 Installation

With all the circuits mapped out I found that I could easily assign what circuits would be on the generator. It was gratifying to find that both furnaces were located in the main panel. Ultimately, I will need to run an extension cord to the in-law to power the refrigerator but Grandma is more than welcome to come over to our side to watch Netflix.

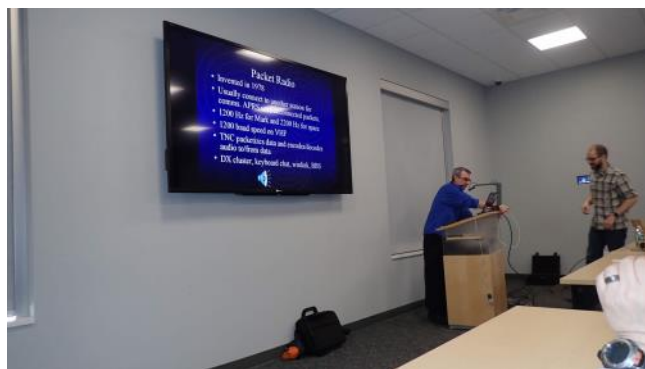
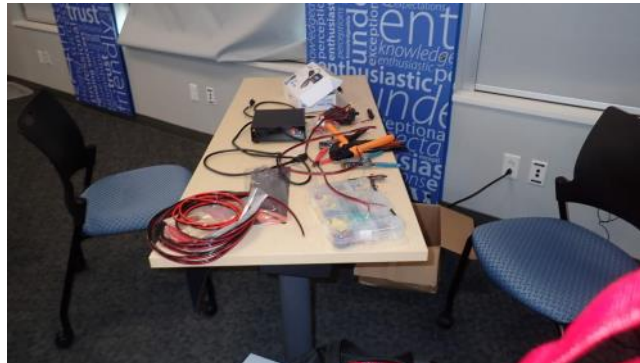
NOTE:

Part II of this article will be found in the June 2019 edition of the RAG.

APRS RARA ACADEMY



Hamfest Committee Meeting



BALLOON LAUNCH FOR W2CXM

MIKE HOJNOWSKI, KD2EAT, ADVISOR, AMATEUR RADIO CLUB AT CORNELL

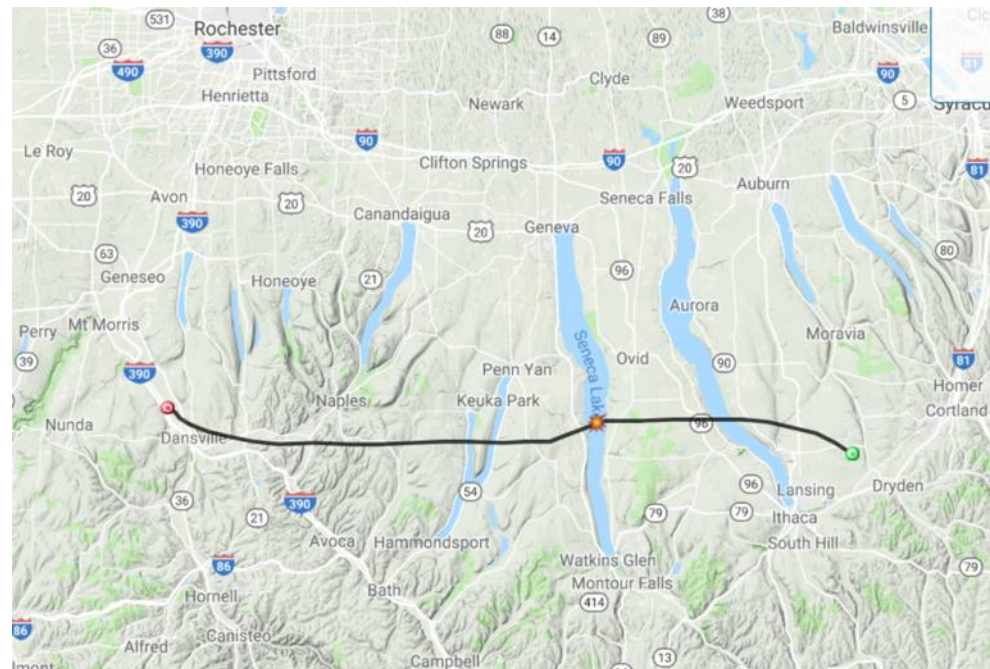


The Amateur Radio Club at Cornell, W2CXM, is planning a high altitude balloon flight on Sunday, April 28, 2019 between 10am – 1pm. Our Rain Date is the following Sunday, May 5 at the same time. The picture above is representative of imagery we capture on these flights. It was captured from a launch we did from the Rochester Hamfest in 2017. Lake Ontario and Rochester are visible.

This year's payload will include a typical set of cameras as well as a cross-band repeater, which you are welcomed to try. The transmit side of the repeater is a very simple VOX activated affair, so you will want to make a moment of noise to wake it up before speaking.

In addition to the cameras and repeater, we will also have a special DTMF activated payload with its own tracker which we will drop on command. This is just to add some additional fun and technology to the experiment.

We generally launch the balloon somewhere West of Ithaca so that it descends into farm country just Northeast of Ithaca. It's a little early to know the exact launch location, but typically it's in the Dansville area. Here's a typical flight pattern, though we won't know for sure until the day before launch. In this example, the balloon bursts over Seneca lake, at about 100,000 feet, and the payload descends by parachute to land Northeast of Ithaca.



The payload will include three APRS trackers. We'll also have chase vehicles.

W2CXM-11:	Main Payload
W2CXM-12:	Main Payload backup (on 144.990)
W2CXM-13:	Drop payload
KD2EAT-9:	Main Payload Chase
KD2JEE-9:	Drop payload Chase
WB2EMS-7:	Airborne reconnaissance (weather permitting)

Our cross-band repeater will be configured as follows:

Repeater receives on: 144.580 PL 103.5 (takes about ½ second to wake up Vox)
Repeater transmits on: 447.025 at 100mw

More details for the flight are on our web site, w2cxm.org. We will continue to update the content there as the flight nears.

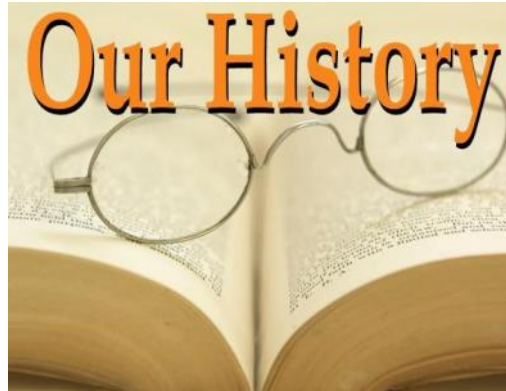
RAGS OF THE PAST

ED GABLE, K2MP, RARA HISTORIAN



40 Years Ago, May 1979

The meeting program only revealed “a short program will follow the annual business meeting.” In this issue was a big splash on the 1979 Hamfest in May and you were encouraged to get reduced price advanced tickets from Hamfest Ticket Chairman Ed Gable K2MP or from *JR Amateur Radio* on Scottsville Road. Jim O'Brien K2UDP, RARA's publicity Chairman, wrote asking for volunteer photographers to take pictures at what is expected to be the largest hamfest ever. The Rochester Radio Repeater Association, RRRRA, choose to use the popular hamfest weekend to conduct a formal dinner meeting at the Marriott with reservations through Bill Gillette WB2KIW. The business meeting included election of officers and Board members as introduced by Nominating Committee Chmn Rich Koehn K2UW. Nominees and their bios appeared in this issue. Congratulations to Alan Komenski AC2K, who will automatically succeed to President next year. President Len Gessin WA2ZNC, selected and announced June 16th as RARA's Annual picnic to be held at Powder Mills Park. Ed Holdsworth N2EH, announced that this year's STPR road rally will be June 9 and 10, and is looking for what he called rigorous volunteers. Speaking of Ed Holdsworth, he brought out RARA's venerable but still running mobile van, a Chevy Corvan, aka K2JD/2, to the Rochester Section of the IEEE. The Rochester Section was pleased to bring well known engineer and author Ulrich Rhode DL2LR, who spoke on “Amateur Radio's Impact on Family and Career.” From the Want Ads you could buy a Clegg FM-27B two meter FM transceiver from Jim Allen WA2DJE. Last month we reported on the end of the full page ad wars with JR Amateur Radio of Scottsville Road the apparent winner. JR went back to a half page ad and up came another full page advertiser, the Heathkit Electronic Center on Jefferson Road. Stay Tuned.



20 Years Ago, May 1999

The May RARA meeting was the traditional Old Timer's Night. At this meeting the members were entertained and enlightened by their very own Ed Gable K2MP/W2AN, Curator of the AWA Electronic Communications Museum, who spoke on “The Development of Early Radio.” This was also RARA's annual business meeting where election of officers and other matters were decided upon. A list of candidates and their biographies swelled this issue to nine pages. And, keeping up with tradition, it was “Chair Night” where the only door prize was a nice swivel chair selected purposely for the hamshack. I believe that winner Dave Payne KA2J, is still using his. As the Rochester Hamfest draws near your Rag Editor was pleased to receive a nice written piece by long term hamfest General Chairman Harold Smith, K2HC. Har-

old reported that the coming hamfest in June would be the 65th year of the Rochester Hamfest and that over 8,000 attendees were expected for the three day event. In a timely manner Lloyd Caves, WB2EFU (N2PU) wrote his fifth and last Rag column for this year detailing events scheduled for the Hamfest. This issue we saw added programs bringing Rus Healy K2UA, speaking on how he conducted QST's New Product Reviews, Ken Goetz N2SQW presenting a RACES meeting, Steve Obenhofer N2ULL, Chmn of the Rochester VHF Group, conducting a VHF/UHF forum and Keniv Kedzierski WA2FKV, conducting the W2”RUF and READY Code Proficiency Tests, where if you can't do 75 words per minute, stay home. Alex, NV2Y, continues his “QRZ'D” column where this month he featured volunteerism and how that effects ham radio. It is there for proper, Alex went on, to recognize Tim MaGee WB2KAO, RARA's licensing Class Director and his crew: Rick W2RW, Art W2YGW, Bill WB2SXY and Bill KG2F for a very successful year. In this issue we also learned that Tim, WB2KAO, has agreed to continue leadership into next year. Ed Gable K2MP, wrote in his DX Happenings column that nice DX catches for the month were: 3B9R, 4Z0A, BI5D, CE9R and a special note of the return of Marion Island as ZS8D. There were no Want Ads within but a long term commercial advertiser was a favorite Saturday morning jaunt to Glenwood Sales on Hague Street.

VE TEAM

The next **ALWAYS FREE** testing session:

Saturday June 1st

RARA HAMFEST

Hilton Exempt Club
137 South Ave
Hilton, NY 14468

Registration at 9:45AM

Testing at 10:00AM

You do not have to preregister.

To avoid giving your SSN go to:

<http://wireless.fcc.gov/uls/index.htm?job=home>

Register and bring the resultant FRN.

For more info:

<https://www.laurelvec.com/?team=RARA>

Don Kiser - AC2EV
RARA Board member
VE Team Leader
585-613-1035

CW ELMERS

Name	Call	Area	Email
Ned Asam	W2NED	Pittsford	w2ned@frontiernet.net
Tim Brown	WB2PAY	Ogden	tjbrown@rochester.rr.com
Pete Fournia	W2SKY	Penfield	pfournia@gmail.com
Bill Hopkins	AA2YV	Brighton	whopkin4@naz.edu
Bob Karz	K2OID	Webster	rkarz@rochester.rr.com
Larry Lavery	WW2J	Fairport	ww2j@arrl.net
Joe Rowe	AG2Y	Webster	ag2y@rochester.rr.com

Earl Harrington Jr	KD2MIZ	E	Austin Heisey	KC1LIT	T
Anthony Trott Jr	KD2RTH	G	Patrick Snell	N2PFS	G
Donald Vallone Jr	KD2REU	G	Roger Van Patten	KD2QPP	G
John Sentiff	KD2PQM	E	Philip Walker	WA2CLX	E
James Stefano Jr	W2COP	E	Jonathan Baumler	KD2RCB	E
Eric Quackenbush	KD2RRE	E	David Doptis	KD2RXU	T

New licensees names are in BOLD

RADIO ELMERS

Name	Call	Area	Email
Tim Brown	WB2PAY	Ogden	tjbrown@rochester.rr.com
Dave Carlson	N2OA	Batavia	kdcarlso@gmail.com
Lawrence Hill	N2AJX	Henrietta	lawrence.hill@rit.edu
Bill Kasperkoski	WB2SXY	Pittsford	wb2sxy@arrl.net
Don Kiser	AC2EV	N Greece	dkiser100@gmail.com
Karl Heinz Kremer	K5KHK	Chili	k5khk@khk.net
Tim Magee	WB2KAO	Greece	585-704-5747
Peter Schuch	WB2UAQ	Perinton	pschuch@rochester.rr.com
Forest Shick	WA2MZG	Webster	fshick3@gmail.com
Dave Timmons	W2DST	N Greece	dstimmons@gmail.com
Dan Waterstraat	W2DEW	Henrietta	higreen@rochester.rr.com

RaRa CALENDAR

TIM BARRETT, K9VB, MEMBERSHIP SECRETARY

May 2019						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 RaRa Monthly Mtg 7:00pm, BSA HQ, Brighton Henrietta TLR ROC City Net 8:00pm 3.826 MHz CWOps Mini-CWT Test	2 RaRa BoD Meeting 5:45pm Novaworks 333 Metro Park, 14623 ARES Net 146.61 MHz 7pm CWOps Mini-CWT Test NRAU 10M Activity Contest NCCC Sprint	3	4 AWA Spring Meet, Bloomfield Araucaria WW VHF Contest 10-10 Contest CW ARI DX Contest 7th Call Area QSO Party IN, DE, New Eng QSO Parties FISTS Slow Speed Sprint
5 Araucaria WW VHF Contest 10-10 Contest CW ARI DX Contest 7th Call Area QSO Party IN, DE, New Eng QSO Parties	6	7 Phone Fray	8 ROC City Net 8:00pm 3.826 MHz SIARC 7.30pm	9 ARES Net 146.61 MHz 7pm NCCC Sprint CWOps Mini-CWT Test	10	11 AWA Museum Open 1pm - 5pm Volta WW RTTY Contest CQ-M Contest AR QSO Party SKCC Sprintathon FISTS Sprint
12 Volta WW RTTY Contest CQ-M Contest AR QSO Party SKCC Sprintathon FISTS Sprint 50MHZ Spring Sprint WAB 7MHz Phone/CW	13 RSGB 80M Club Contest SSB	14 Phone Fray	15 ROC City Net 8:00pm 3.826 MHz CWOps Mini-CWT Test	16 ARES Net 146.61 MHz 7pm NCCC Sprint	17 Dayton Hamvention Portuguese Navy Day Contest	18 AWA Museum Open 1pm - 5pm Dayton Hamvention Portuguese Navy Day Contest UN DX Contest King of Spain Contest CW EU DX Contest Baltic Contest
19 Dayton Hamvention Portuguese Navy Day Contest UN DX Contest King of Spain Contest CW EU DX Contest	20 Tour de Cure Volunteer Training Webster Rec Center 1350 Chiyuda Dr 6pm	21 RDXA 7.30pm Monroe Cty EOC Phone Fray SKCC Sprint	22 ROC City Net 8:00pm 3.826 MHz CWOps Mini-CWT Test	23 Monroe Cty ARES 6pm, Red Cross Center, Prince St NCCC Sprint	24	25 AWA Museum Open 1pm - 5pm CQ WW WPX Contest CW
26 CQ WW WPX Contest CW	27 QCX Challenge	28 Phone Fray QCX Challenge	29 ROC City Net 8:00pm 3.826 MHz CWOps Mini-CWT Test	30 ARES Net 146.61 MHz 7pm NCCC Sprint RSGB Club Challenge 80M CW	31	

NEWS FROM AREA CLUBS

MONROE COUNTY ARES / RACES NEWS

The Monroe County Amateur Radio Emergency Service, Inc. holds its meetings on the fourth Thursday of each month. Anyone interested, members and non-members, are welcome to attend.

The next ARES Meeting will be held on: **Thursday, May 23, 2019, at 6:00 PM.**

Meetings are held at the **Greater Rochester Chapter of the American Red Cross HQ, 50 Prince Street, Rochester, NY 14607.** (Located behind the Rochester Auditorium Theatre, 885 Main St. E.)



ARES NET: Monroe County ARES/RACES meets on the air every Thursday of the month at 7:00 pm, on the 146.61 MHz (-) 110.9 Hz PL repeater. The only exception to that are nights when we hold our regular meeting, generally on the 4th Thursday of the month.

WEB: www.monroecountymcomm.org

Severe Weather Alerts:

Winter brings severe weather in the form of heavy snow and strong winds. If you experience severe weather, especially when accompanied by damage to property in your area, listen to your local ARES/RACES repeaters for information. While official ARES/RACES activation could be a possibility, it is more important that we open a spontaneous net simply to share information about weather conditions in your immediate area. Don't wait for someone else to do it. Pick up the microphone and start a net. Have each check-in station give you a situational awareness report and emergency power report. If you don't have a copy of the directed net protocol, you can find one at the WEB address listed above. (Activities/ARES Net/ Net Script/ Downloads)

ROCHESTER DX ASSOCIATION, RDXA

RDXA meets the 3rd Tuesday of every month (September through May) except for December, which is the Annual Holiday Banquet. Meetings are open to everyone and all are encouraged to attend. The next meeting is Tuesday May 21, 2019

The May RDXA General Membership meeting presentation will be remote station operation by Jeff Ach, W2FU. All are welcome.



Meetings are held at the Monroe County EOC 1190 Scottsville Rd. (second floor), Rochester, NY 14624 at 7:30PM.

ROCHESTER RADIO REPEATER ASSOCIATION

The Rochester Radio Repeater Association, RRRA invites you to attend its May 17, 2019 meeting. Meetings are held on the 3rd Friday of the month in the Pittsford Town Hall Basement starting at 7:30 PM.

May is our month for nominations to become an officer of RRRA. There will be an open forum if any one wants to state why they would like to be an officer. The positions open will be for Secretary, Treasurer, and Vice President. Bob Shewell will be ascending from Vice President to President. Besides nominations we will also be discussing where or what the membership expects from the new board. The elections will be held during our June 21 meeting.

The RRRA officers are Bob ODell, N2BZX President, Bob Shewell, N2HJD Vice President, ED Wilkonski, KC2WM Secretary, and Bob Smith, NS2B-Treasurer / Membership Chairman. RRRA also accepts donations to the club. If you are not currently a member and want to support RRRA, you can join at our monthly meeting or on our web site www.k2rra.org

ROCHESTER VHF GROUP

The Rochester VHF Group sponsors an informal On-Air Net every Monday at 2100 local time on 144.260 MHz USB and a 6 Meter Net every Thursday at 2100 local on 50.200 MHz USB.

More club information can be found by visiting www.rvhfg.org or just calling in any Monday or Thursday night. All are welcome to check in to these nets.

XRX AMATEUR RADIO CLUB

The XRX Amateur Radio Club will have their next meeting at 6PM on Thursday May 9th at the Webster Recreation Center. Look for details on our website <http://xarc.us>

DRUMLINS AMATEUR RADIO CLUB

The Drumlins Amateur Radio Club meets every third Wednesday of the month at 7:30 PM at the Wayne County EMO/Sheriff's Office 7376 State Hwy 31 #1000, Lyons, NY 14489. Doors open at 7 pm, meeting starts at 7:30 pm. Announcements will be made on the 146.685 repeater. The Drumlins Hamfest will be held Sat April 27, 2019 beginning at 8 am. Palmyra VFW. Contact Rich at Tinker@rochester.rr.com for information. Drumlins ARC website address is <http://drumlinsarc.us/>

AMATEUR RADIO ASSOCIATION OF THE SOUTHERN TIER, ARAST

ARAST meets the third Thursday of every month at the Town and Country Fire Department on Gardner Rd in Horseheads New York. Chemung County ARES (CCARES) meets the first Tuesday of the month except February at Harris Hill. See www.ccares.info for details. CCARES covers the entire area in Chemung, Schuyler and Steuben counties and all are welcome.

Several members are talking about getting their equipment ready for Field days coming in June. It's never too early to plan ahead.

Communicators are needed to help with the 2019 Wineglass Marathon October 6, 2019 (one week following the Hamfest). If you would like to help, contact the emergency coordinator: emergencycoordinator@stny.rr.com.

The Paypal feature for this year's hamfest is off line and will be restored as soon as tickets are available. I've been told that the tickets are at the printers and should be available soon.

2019 Hamfest will be the last Saturday of September 2019. Stay tuned for more details.

Our website is still under construction. It is anticipated that construction will continue well into the year. Until that is finished check us out at www.arast.info.

Don't forget to check out our repeaters when you visit the area. The N3AQ 147.36(+) and the 146.70(-) are the principal 2 meter repeaters. Also, Echolink is available using the call sign KA2BED-R. Check it out. A full list of available repeaters that can be heard in the twin tiers area surrounding Chemung County can be found at www.arst.info/arast_website/public/repeaters.php.

COMMUNITY AMATEUR RADIO CLUB, CARC

If you are interested in being a part of this forward thinking and active club, visit us at a meeting or join us on one of our weekly nets. We meet at the Hoag Library (134 S. Main St. Albion, NY) on the first Saturday of each month at 7PM. Each meeting has a brief training/refresher period with upcoming topics including: net protocol, repeater set-up/maintenance, and digital signaling. The club holds a net every Sunday evening at 8pm (winter) and 9PM (summer) - 0100 UTC Monday - on 147.585 simplex, and we host the Thursday Night Social Net, Thursday at 8:30PM on 147.285+. We'd love to hear you check-in! Take a look at the club website for more info: www.k2srv.org

DIGITAL COMMUNICATIONS ASSOCIATION OF PERINTON, DCAP

DCAP members continue to experiment with leading edge digital communications modes. We were formed in 1994 to foster the development of local and regional packet radio networks using AX25 and TCP/IP. Today we have mem-

bers using the club sponsored DSTAR repeater (KB2VZS on 444.8MHz), several personal and public [DSTAR hotspots](#) (using the dvprtr board), Yaesu fusion systems on non-club repeaters and DMR. The last mode is being enjoyed locally through a [DV-Mega-Raspberry PI](#) combination. DCAP meets for breakfast at 7AM nearly every Saturday morning at [Rikki's Family Restaurant](#) in Fairport and everyone is welcome to join us. Talk in is on the KB2VZS analog repeater on 146.715 MHz with a PL of 110.9 Hz.

KEUKA LAKE AMATEUR RADIO ASSOCIATION, KLARA

The Keuka Lake Amateur Radio Association is hosting a 2 Meter FM Simplex Challenge open to any licensed amateur operator. The object is to make as many contacts in many different zip code areas as possible in 5 hours.

This will be held May 18, 2019 beginning at 12:00 pm and ending at 5:00 pm local time. Everyone is encouraged to participate and submit their log regardless of how many contacts they have. This is intended as a fun contest to learn about using 2 Meter FM Simplex instead of repeaters, Echolink or digi-modes. This year we are limiting the area to be Steuben County and its immediate surroundings with the goal to be enlarging it in the future. Lets have fun, share the frequencies, help each other and learn together.

For further information, such as the rules, the map of the area, suggested frequencies and exchange please check out our website at www.KLARA.US

We would love to have you join in and lets all have fun together.
73, KD2BPJ Belinda Connor, Keuka Lake Amateur Radio Association

SQUAW ISLAND AMATEUR RADIO CLUB, SIARC

The Squaw Island Amateur Radio Club (SIARC) meets every second Wednesday of the month at 7:30PM at the Ontario County Safety Training Facility, 2914 County Road 48, Town of Hopewell. We have License Exam Testing every other month which begins at 6:30PM. The next meeting will Wednesday, May 8th. The meeting will be at the Human Resources Building at the county complex and not at the Safety Training Building. There will not be license Exams this month. <http://siarc.us/> 73's Steve Benton VP SIARC WB2VMR

SIARC EVENTS

Day	Date	Event	Location	Contact
Saturday	April 27	Wild Water Derby	Shortsville	kb2nci@arrrl.net
Friday	July 12-14	Musselman Triathlon	Geneva	kb2nci@arrrl.net
Sunday	September 8	Finger Lakes Triathlon	Canandaigua	kb2nci@arrrl.net
Sunday	October 6	Wine Glass Marathon	Steuben County	kb2nci@arrrl.net

WESTSIDE AMATEUR RADIO CLUB

The mission of the Westside Amateur Radio Club is to provide emergency communications services to the community, to assist other civic organizations, to promote the technical craft of amateur radio through class training and testing, to mentor new members, and enhance fellowship among radio amateurs.

The Westside Amateur Radio Club meets on the first Tuesday of the month, 7PM, at the Prudential Kares Realty, 3313 Chili Ave., Rochester, NY 14624. Park / enter on the left side of the building and meet in the lobby.

The talk in repeater for all meetings is the WR2AHL Repeater 146.760MHz - 110.9. AllStar, Echolink, and web streaming connections are available.

Website: <http://WestsideAmateurRadio.club>

INTERLOCK ROCHESTER - K2HAX - ROCHESTER'S HACKERSPACE

Visit our website at <http://www.interlockroc.org/>, contact us at info@interlockroc.org, or find us in #interlock on Freenode IRC.

ROCHESTER MAKERSPACE

For more information visit <https://www.makerspacerochester.org/hamradio>

GENESEE VALLEY AMATEUR RADIO ASSOCIATION

Email n3dsp@lafireline.net for details.

ASTRONOMY SECTION ROCHESTER ACADEMY OF SCIENCE

For more information visit <http://www.rochesterastronomy.org/>

Pass it forward
by donating your radio
or accessory to RARA.



Your item may be sold at future RARA events with proceeds to benefit RARA members.

You will get a tax-deductible receipt and the satisfaction that comes with doing good for others.

Call 585-210-8910 or email
Secretary@RochesterHam.org.

RARA is an IRS 501.c.3 non-profit

Consult with your tax advisor.

THE AMATEUR'S CODE

Originally written by Paul M. Segal, W9EEA (1928)

THE RADIO AMATEUR IS:

- | | |
|--------------------|--|
| CONSIDERATE | Never knowingly operating in such a way as to lessen the pleasure of others. |
| LOYAL | Offering loyalty, encouragement and support to other amateurs, local club, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally. |
| PROGRESSIVE | With knowledge abreast of science, a well built and efficient station and operation beyond reproach. |
| FRIENDLY | With slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit. |
| BALANCED | Radio is an avocation, never interfering with duties owed to family, job, school or community. |
| PATRIOTIC | With station and skill always ready for service to country and community. |

QRP Quarterly

QRP Amateur Radio Club
International

www.qrparci.org

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Contact us for details at
editor@rochesterham.org.

RARA OFFICERS, DIRECTORS AND COORDINATORS

OFFICERS

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Vice-President: Scott Theis, W2LW	(845) 774-9809	sa_theis@hotmail.com	Secretary: Mike Moore, KC2NM	(585) 721-0011	mikemoore@ieee.org

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Tim Brown, WB2PAY	(585) 750-2087	tjbrown@rochester.rr.com	Karl Heinz Kremer, K5KHK	(585) 503-7214	k5khk@khk.net

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Membership Secretary	Tim Barrett, K9VB	tim.k9vb@gmail.com	Webmaster	Scott Theis, W2LW	webmaster@rochesterham.org

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Drumlins Amateur Radio Club Ltd. (DARC)

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Fisherman's Net Amateur Radio Club

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Genesee Valley Amateur Radio Assn.

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Monroe County ARES

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Orleans County Amateur Radio Club (OCARC)

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Squaw Island Amateur Radio Club (SIARC)

Steve Benton, WB2VMR: sbenton2@rochester.rr.com

Westside Amateur Radio Club

Justin Grigg, KC2EQU: communications@westsideamateurradio.club

XRX Amateur Radio Club

Brian Donovan, K2AS: k2as@outlook.com

JUNE RAG DEADLINE MAY 15, 2018



**RARA meets at 7PM on the first
Wednesday of each month. Join us at:**

Seneca Waterways Council, BSA Headquarters
2320 Brighton Henrietta Town Line Rd
Rochester, New York 14623

GET DIRECTIONS

Rochester Area Repeater Listing

THE RARA RAG

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